



The Decline of the Eastern Rosella and other Psittaciformes in Tasmania Concomitant with the Establishment of the Introduced European Starling

R. H. Green
Queen Victoria Museum, Launceston

Manuscript received 17/11/82

Published 15/3/83

Tasmanian populations of the Eastern Rosella *Platycercus eximius* and some other small hole-nesting Psittaciformes have been significantly reduced in the last 50 years. The decline is concomitant with the establishment and spread of the introduced European Starling *Sturnus vulgaris* and is believed to be a consequence of nesting-hole usurpation by starlings.

INTRODUCTION

The Eastern Rosella *Platycercus eximius* (Shaw, 1793) is a sedentary species occurring in south-eastern Queensland, New South Wales, Victoria, south-eastern South Australia and Tasmania. It lives in savannah woodland, trees bordering watercourses, timbered farmlands, croplands, orchards and parks and gardens (Foreshaw, 1969). It often feeds on the ground, in open grassy places, but will not venture far from trees to which it can retreat if disturbed.

In Tasmania, its distribution and population have been significantly reduced during this century and the data and opinions given below have been gathered and presented to draw attention to this decline and to similar trends in some other Psittaciformes which use tree-hollows for breeding. These declines appear related to the gradual clearing of eucalypts for pasture improvement and a consequential reduction in potential nesting cavities, together with the phenomenal, but often overlooked, increase and spread of the introduced European Starling *Sturnus vulgaris*.

The starling was introduced into Tasmania about 1880 (Sharland, 1968) and soon populated and dispersed, favouring that habitat to which the Eastern Rosella was naturally restricted. The combination of fewer nest-holes and an ever-increasing pressure of competition from starlings for such breeding places is believed to be the cause of the rosella's decline.

2 The Decline of the Eastern Rosella and other Psittaciformes in Tasmania Concomitant with the Establishment of the Introduced European Starling



Tasmania, showing areas of cleared land /// (after Jackson, 1965 p.31) and localities ● from where Eastern Rosellas were reported in 1980-1981.

HISTORICAL BACKGROUND

The Tasmanian population of the Eastern Rosella is an endemic subspecies *Platycercus eximius diemenensis* North, 1911. It does not occur on the islands in Bass Strait.

Gould (1848) found it "one of the commonest birds in . . . Van Diemen's Land" and comments on it being "very local". He found it "numerous throughout the centre of the island between Hobart and Launceston, where small companies may constantly be seen resorting to public roads, like sparrows in England". He also states that they were destroyed "with no sparing hand, for some slight injury they may have inflicted upon the rising corn".

West (1852, Vol. 1, p. 332) states "The green and rose-hill parrots . . . occur in immense flocks in some places and prove very destructive to the ripe grain in the fields, as also injuring the roofs of corn stacks in the barn yards".

Littler (1910) comments on "the irregular manner in which the Rosella is distributed in Tasmania", finding it "an entire stranger" in some districts and "most plentiful" in others. He states "it is much disliked by farmers, and its ranks thinned by means of poison and shot-guns".

North (1911, quoting Mr. M. Harrison) states "The 'Rosella' Parakeet (*Platycercus eximius*) is common throughout Tasmania where the country is fairly open and grassy . . . At Austins Ferry it still breeds in fair numbers, although the Starling is gradually taking possession of every nesting-place, to the exclusion of native birds of similar nesting habits".

Sharland (1958) gives it as "Common. Forests, open, orchards . . . not as common or as widely distributed as the Green Rosella".

Green (1977) gives it as "Common" (meaning regularly seen as occasional pairs and individuals) "and sedentary in restricted areas of dry sclerophyll forest and savannah woodland. Occasionally visits orchards".

The Author's knowledge of the Eastern Rosella in the pastoral areas of the Midlands spans over 50 years and in this time he has seen it disappear from localities where it was once abundant. He believes this was not a result of human predation but a consequence of the usurpation of its nesting holes by starlings and thus, breeding failure. Subsequently an insufficient recruitment of young stock created ageing populations which eventually lead to a numerical decline and local annihilation.

PRESENT DISTRIBUTION AND STATUS

In November 1980, the Author drew attention through the news media, to the decline of the Eastern Rosella and asked for people to advise him of the whereabouts of populations and for their impressions of trends in its numbers. This resulted in the receipt of about 70 letters and calls to report localised populations, many with additional comments upon the birds' habitats and decline.

The distribution of the reported sightings is plotted on the map and approximates that of Thomas (1979), though somewhat reduced. As Thomas' map covers reported distribution back to 1900, this reduction is to be expected. The present map is not claimed to be complete as no doubt there are additional small populations within the general area from which birds are recorded.

Reports of sightings were made in 68 localities (see Appendix), the greatest concentration being within 25km of Hobart. Rarely were more than 10 birds reported from one locality, the greatest number being about 50 near Pontville.

In response to the questioning of some long-term residents, it was clearly indicated that, within their lifetimes, the Eastern Rosella had declined or disappeared from some localities, especially in the Midlands, where it was remembered as once being plentiful. As an example, a farmer near Antill Ponds in 1940 shot, in one season, over 200 from apple trees in his garden in a vain attempt to deter others from taking the fruit. The rosella was abundant there at that time. By 1960 its numbers had drastically declined and today it no longer occurs in the district.

An old Oatlands resident told of in his youth being given all the ammunition he could fire if he would hide amongst the stocks of oaten hay at harvest time and shoot or frighten the flocks of rosellas which were eating the grain. Such populations and problems no longer occur.

OTHER PSITTACIFORMES

The Green Rosella *P. caledonicus*, once found in numbers far greater than it is today (West 1852), was also a pest to orchardists and grain growers. The Author remembers it flocking to orchards to feed on fruit and to stacks of oaten hay, pulling out the thatch in order to reach the seed heads, subsequently exposing the hay to rain and decay. Large numbers also congregated, in autumn and winter, in Hawthorn *Crataegys monogyna* hedgerows to feed on the ripe berries in such abundance that they could be counted in hundreds. Today these hedgerows are depopulated and only a mere fraction of the number which once fed amongst them may now be seen.

4 The Decline of the Eastern Rosella and other Psittaciformes in Tasmania Concomitant with the Establishment of the Introduced European Starling

The Green Rosella has the advantage of a distribution greater than that of the Eastern Rosella and starling. It ranges into wet sclerophyll forest and other areas where the starling has not become established. In these areas, where it breeds beyond the range of starlings, it is likely to maintain relatively strong, stable populations. In agricultural areas, woodland and dry sclerophyll where it faces strong competition from starlings for suitable nesting sites, its numbers will remain low and probably supported by emigrants from beyond the starlings' distributional range.

The Blue-winged Parrot *Neophema chrysostoma* and the Orange-bellied Parrot *N. chrysogaster* have also declined considerably. In the first half of this century, the Blue-winged Parrot could be found, in summer and autumn, in flocks of up to 25 feeding amongst Slender Thistles *Carduus tenuiflorus* growing in introduced pasture and in areas of native grass-land, especially in the Midlands. This is not the case today. The Orange-bellied Parrot, once occurring and breeding in the southern Midlands (North, 1911) is now reduced to the verge of extinction, its breeding range having shrunk to a very restricted area of the coastal south-west. The decline of these two small hole-nesting parrots is concomitant with the population explosion and spread of the starling.

When nesting in tree-hollows, starlings carry into the cavities a considerable quantity of dry vegetation and feathers to form a bulky nest. If another species is already in occupancy, starlings may usurp this site by depositing their nesting material on top of the sitting occupant with such persistence as to eventually overwhelm and eject it, covering the eggs and rendering the site unsuitable for Psittaciformes.

Harrison's observations of starlings usurping rosellas' nests (North, 1911) has been confirmed by others. The late A. W. Swindells (pers. comm.) found starlings usurping the nest-holes of Blue-winged Parrots in the York Plains district about 1930. More recently T. A. Singline (pers. comm.) related his observations on Flinders Island in 1980. He states "The Green Rosella appears to be having trouble nesting, on account of the starlings. I watched 7 Green Rosellas' nesting holes and only one looked like having a successful nesting. Four nesting holes being worked by Green Rosellas had broken rosella's eggs on the ground under the tree and the holes were being fought for by both species of birds. Another hole was being worked by both male and female rosella and when I climbed to it I found it contained four starling's eggs and I found one broken starling's egg under the tree. At another hole the male rosella was looking in, screeching at a sitting starling. The one that looked OK had a nest about three metres above a Boobook's hole . . . I have also noticed some Green Rosellas having the same trouble in Tasmania".

Gleeson (1980) refers, with concern, to starlings competing with rosellas and Gang-Gang Cockatoos at Waratah Bay, Victoria, and Kenneth A. Gunn (pers. comm.) expresses a similar concern as a result of his observations in the Sydney area.

Psittaciformes are notably a long-lived bird and thus population declines would not be apparent until some considerable time after the commencement of breeding failures and the subsequent fall-off in recruitment of young birds into the population. This appears to have been the case in Tasmania over the past half century as the numerical decline of the rosellas and small parrots apparently did not commence until some time after the starling reached sufficient numbers to successfully occupy most available nest cavities. The subsequent decline was then so gradual that it was generally overlooked.

It is now apparent that a threat exists, in the long term, to the survival of those species of Psittaciformes which are restricted in their breeding range to that of the European Starling. Unless a method can be developed to significantly reduce the starling population or otherwise prevent it from usurping the nesting sites of native birds, we may eventually find other species at the critical level to which the Orange-bellied Parrot has now declined.

REFERENCES

- FORESHAW, Joseph M. 1969. *Australian Parrots*. Lansdowne Press, Melbourne.
- GLEESON, John 1980. The trouble with starlings. *The Bird Observer* 587, 103.
- GOULD, John 1848. *The Birds of Australia*. The Author, London.
- GREEN, R. H. 1977. *Birds of Tasmania*. The Author, Launceston.
- JACKSON, W. D. 1965. Vegetation. In Davies, J. L. (ed.): *Atlas of Tasmania*. Lands and Surveys Department, Hobart.
- LITTLER, Frank Mervyn 1910. *A Handbook of the Birds of Tasmania and its Dependencies*. The Author, Launceston.
- NORTH, Alfred J. J. 1911 *Nests and Eggs of Birds Found Breeding in Australia and Tasmania* Vol. III. The Australian Museum, Sydney.
- SHARLAND, Michael 1958. *Tasmanian Birds*. Angus and Robertson, Melbourne.
- SHARLAND, Michael 1968. Wildlife Introductions. *Tas. Nat.* 14, 2.
- WEST, John 1852. *The History of Tasmania*. Henry Dowling, Launceston.

APPENDIX

Localities from where Eastern Rosellas were reported in 1980-1981.

Alonnah	Kellevie
Apsley	Kingston
Badger Head	Lauderdale
"Beaufront", Ross	Lewisham
Bellerive	Little Swanport
Blackmans Bay	Longford
Bothwell	Mathinna
Bream Creek	Mt. Rumney
Cambridge	New Town
Campania	Norwood
Carlton	Orford
"Charlton", Ross	Palmerston
Claremont	Paramatta Creek, Sassafras
Cleveland	Pelham Tier
Coles Bay	Princes Bay, Saltwater River
Conara	Primrose Sands
"Connorville", Cressy	Railton
Cremorne	Risdon Vale
Devon Hills	Sandford
Dolphin Sands	Sandy Bay
Epping Forest	Seven Mile Beach
Evandale	Sidmouth
"Evercreach", Fingal	Symmons Plains
Exeter	Sorell
"Fairfield", Cressy	Squeaking Point
"Fosterville", Campbell Town	Steppes
Glenfern Road, New Norfolk	"Strown", Deddington
Greens Beach	Taroona
"Green Hills", Forcett	Tea Tree
Hadspen	Thirlstane
Hagley	Triabunna
Liffey	Windermere